

## NSLS OHSAS Job Risk Assessment

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<b>Name(s) of Risk Team Members:</b> B. Chmiel, L. Fareria, B. Kiss, E. Losee, C. Nielson	<b>Point Value → Parameter ↓</b>	1	2	3	4	5
<b>Job Title:</b> <span style="color: blue; font-weight: bold;">Machine Shop Use</span>  <b>Job Number or Job Identifier:</b> <span style="color: blue; font-weight: bold;">LS-JRA-0017</span>	<b>Frequency (B)</b>	≤once/year	≤once/month	≤once/week	≤once/shift	>once/shift
<b>Job Description:</b> Use of machine shops within buildings 725, 726, and 801. The machine shops in these buildings are under the control of the NSLS Department.	<b>Severity (C)</b>	First Aid Only	Medical Treatment	Lost Time	Partial Disability	Death or Permanent Disability
<b>Training and Procedure List (Optional):</b> At a minimum, all machine shop users must complete the following courses: LS-ENV-SHOP; LS-SH-RULES1; LS-SH-VID2. To utilize machine shops without supervision, additional training and evaluation is required.	<b>Likelihood (D)</b>	Extremely Unlikely <<1x/20yrs	Unlikely 1x/10-20yrs	Possible >1x/10-20yrs	Probable 1x/yr	Multiple >1x/yr
Approved by: W. R. Casey      Date: 9/8/05 Rev. #: 1 <a href="#">Revision Log</a>						
<b>Stressors (if applicable, please list all):</b> N/A		<b>Reason for Revision (if applicable):</b> N/A			<b>Comments:</b> N/A	

		Before Controls							After Initial Controls						After Additional Controls					
Job Step / Task	Hazard	Stressors Y/N	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	Initial Controls	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	Control(s) Added to Reduce Risk	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	% Risk Reduction

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Machines set up & break down including alignment of materials on machine tools, and clean up. Inclusive of manual material handling and use of hand tools.	Lacerations, contusions, fractures, strain/sprain, overexertion.	N	1	4	3	3	36	Training, required PPE, proper tools for the task, good housekeeping practices, Adequate lighting, Tier 1, assistance with heavy items, adequate clearances and aisle ways around machines, machines secured to mounting surfaces, material properly secured. <b>LS-JRA-0014, LS-JRA-0018</b>	1	4	3	2	24							
	Inadvertent starting	N	1	4	4	2	32	Training, Verify de-energized, machine locked out, power source in line of sight.	1	4	4	1	16							
Installation or replacement of cutting tools/blades in machine tools.	Lacerations, contusions, use of hand tools	N	1	2	4	3	24	Training, required PPE, proper tools for the task, good housekeeping practices, adequate lighting, procedures, adequate clearances around machines, machines secured to mounting surfaces, Tier 1, <b>LS-JRA-0014.</b>	1	3	2	2	12							

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	Inadvertent starting	N	1	2	4	2	16	Training, Verify de-energized, machine locked out, power source in line of sight	1	2	4	1	8							
Adjust machine to appropriate task	Lacerations, contusions, crushing injuries, fracture, overexertion, use of hand tools	N	1	4	3	3	36	Training, required PPE, removal of tools (e.g. chuck key) prior to start, proper tools, adequate lighting, procedures, good housekeeping, Tier1, verification of correct machine speed/settings prior to operation, adequate clearances around machines, machines secured to mounting surfaces, machine maintenance.	1	4	3	2	24							
Milling, drilling, cutting or turning operations	Stuck by an object, burns from metal chips, lacerations, and puncture wounds, injuries from flying debris, fracture, and abrasions.	N	1	4	4	3	48	Training, procedures, Required PPE, adequate lighting, good housekeeping, procedures, machines equipped with safe start devices, machines secured to mounting surfaces, machine maintenance, proper use of machine	1	4	3	2	24							

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								guarding, material properly secured, appropriate dress, removal of tools (chuck key).												
Milling, drilling, cutting or turning operations	Entangled clothing	N	1	4	4	3	48	Training, machine maintenance, adequate clearances around machines, proper use of machine guarding, appropriate dress, machines equipped with safe-start devices	1	4	3	2	24							
Milling, drilling, cutting or turning operations	Chemical exposure, inclusive of air quality concerns, (exposure to mist, dust, fumes), dermatitis, allergic reactions	N	1	4	2	3	24	Training, central vacuum, proper selection of cutting fluids, MSDS, required PPE, good housekeeping, proper use of machine guarding, adequate ventilation, machine maintenance	1	4	1	2	8							
Milling, drilling, cutting or turning operations	Noise exposure	N	1	4	3	2	24	Noise surveys, hearing conservation program, training, required PPE, proper use of machine guarding, machine maintenance, postings	1	4	2	1	8							

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Shearing, bending and punching operations	Lacerations, contusions, abrasions, fractures, crush injuries, struck by object, and injury from flying debris	N	1	4	3	3	36	Training proper use of machine guards, required PPE, good housekeeping, proper clearance around machines, adequate lighting, machine maintenance, Tier 1, Do not exceed machine limits.	1	4	3	2	24							
Sharpening bits and cutting tools with grinder	Lacerations, flying debris, burns	N	1	2	3	3	18	Training, required PPE, proper use of machine guarding, procedures, machine maintenance, adequate clearances around machines, machines secured to mounting surfaces, proper adjustment of work rest.	N	1	3	2	6							
De-burring of finished parts	Lacerations, abrasions, burns	N	1	3	2	3	18	Training, proper use of hand tools, safety glasses	1	3	1	2	6							

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Removing turnings/scrap materials from machining processes	Lacerations, burns, dermatitis	N	1	3	2	3	18	Ensure machine is de-energized, appropriate tools for the task, training, required PPE, adequate lighting, good housekeeping, practices, tier 1	1	3	1	2	6							
Use of compressed air in machine shops	Skin penetration, injuries from flying debris	N	1	3	2	2	12	Approved air regulators, training, required PPE, pressure regulator on compressors, good house keeping, Tier 1 approved air guns	1	3	2	1	6							
Further Description of Controls Added to Reduce Risk:																				
*Risk:	0 to 20 Negligible	21 to 40 Acceptable						41 to 60 Moderate				61 to 80 Substantial				81 or greater Intolerable				